User Guide

Linksys PLW400 | Powerline AV Wireless Network Extender

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Overview

Thank you for choosing this Linksys PLW400 wireless Powerline network adapter. This adapter provides easy setup and let you connect wireless network devices to your Powerline network.

This setup guide assumes you already have a working Powerline network.

You can find more help from our award-winning, 24/7 customer support at **Linksys.com/support**.

Features

Wi-Fi Protected Setup™ button—Press this button to connect with other wireless network devices that have a Wi-Fi Protected Setup button.

HomePlug Simple Connect button—Configures advanced security (the network password) for your Powerline network.

Reset button (recessed)—To restore the factory default settings (including the advanced security settings and the network password), use a pointed object to press and hold the **Reset** button for at least ten seconds.

Powerline LED—The Powerline LED turns on when the adapter is connected to the Powerline network. The LED flashes to indicate network activity.

Ethernet LED—The Ethernet LED turns on when a wired network device is turned on and connected to the adapter's Ethernet (network) port. The LED flashes to indicate network activity.

Wireless LED—The Wireless LED turns on when a wireless network device is connected to your PLW400.

Wi-Fi Protected Setup LED—This LED flashes while a wireless network device is connecting with your PLW400 using Wi-Fi Protected Setup.

Power LED—The power LED turns on when the adapter is connected to a powered electrical outlet.

Ethernet port—Use a network (Ethernet) cable to connect this port to a wired network device.

How Powerline networking works

Electrical wiring runs through your home or office, carrying power to electrical outlets in every room. The typical wired Ethernet network uses Ethernet network cables to connect your wired network devices. A Powerline network uses your existing household wiring as the wiring for your Powerline network.

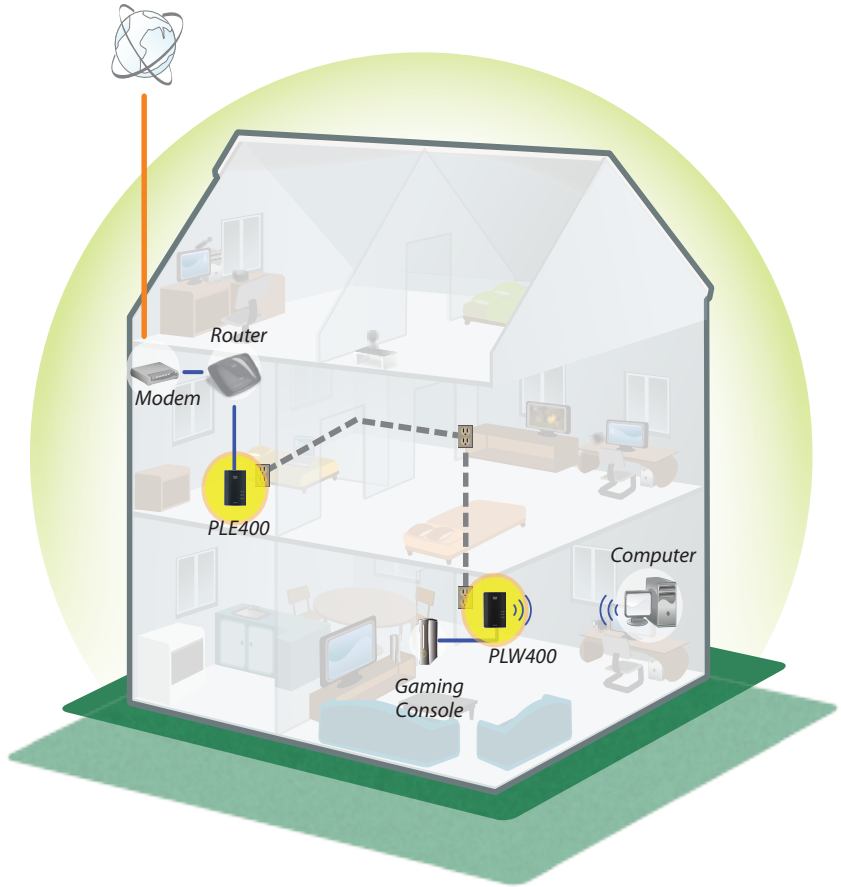
To create your Powerline network, use two or more Powerline adapters. Each device on your Powerline network requires a connection (either wired or wireless) to a Powerline adapter.

Your **PLW400** contains one Ethernet port and a wireless access point. You can connect one wired device and several wireless devices to it.

Example installation

This diagram shows a basic Powerline network in a house. The router upstairs is connected to a Powerline adapter, which is plugged into an electrical outlet. Downstairs, the gaming console and a computer are connected to the PLW400, which is plugged into an electrical outlet.

Using the household wiring of the home, the router expands the local network to include the gaming console and desktop computer in the living room. Internet access, files, and printers can be shared between the computers and other networked devices. For online gaming, you can play downstairs in the comfort of your living room, while using the high-speed Internet connection of the router and modem upstairs.



Installing the PLW400

Installation overview

To set up your Powerline network, you should:

- Make sure you already have Internet access and a working home Powerline network.
- Make sure that the wireless devices that you want to connect to the PLW400 have a working wireless feature. An easy way to test this is to first try to connect the wireless network device to your home's wireless router while near the router.

Tips

- If possible, connect Powerline adapters directly to a wall power outlet, and not to an extension cord, power strip, or surge protector.
- If a Powerline adapter must be installed onto a power strip, make sure that no other electronic devices are connected to the same power strip.
- If possible, position the PLW400 near the wireless devices that you want to connect.
- Avoid obstructions (such as metal file cabinets, mirrors, and thick walls) between the PLW400 and any wireless device you want to connect.

How to connect your PLW400

After you have a basic Powerline network set up, you can add this PLW400 anywhere in your home.

TIP
You can also set up and configure all of your Linksys Powerline devices using the configuration utility. For more information, see "Using the Utility" on page 6.

To connect your PLW400:

1. Make sure that the power switch on the right side is set to **I** (on).

2. If your home network already has security set up (recommended):
   a. Connect the PLW400 to a power outlet near your main wireless router.
   b. On the PLW400, press and hold the Wi-Fi Protected Setup button at least one second, until the the Wi-Fi Protected Setup LED flashes.

c. Within two minutes, press the Wi-Fi Protected Setup button on your wireless router. The PLW400 retrieves the security settings from the router and connects to your wireless network.

3. Move your PLW400 to a power outlet near the wireless network device(s) you want to connect. Typically, this area is not covered well by your home's wireless network router.

   The Powerline LED flashes, then stays on when the connection to the rest of the Powerline network is finished. Your home's wireless network is now available in the area surrounding the PLW400.

4. Connect the wireless network device to the wireless network in the usual manner. For instructions, see your wireless network device's user documentation. The PLW400's Wireless LED flashes, then stays on when a wireless network device successfully connects.

Setting up advanced security

NOTE
The devices connected to the Powerline adapters will temporarily lose Internet connection during the security setup.

To configure your network adapter with advanced security:

1. On one of the existing Powerline adapters that already have advanced security set up, press and hold the HomePlug Simple Connect button for at least one second, until the Powerline LED begins flashing slowly.
2. On your PLW400, press and hold the HomePlug Simple Connect button for at least one second, until the Powerline LED begins flashing slowly. When the LED stops flashing, the network key has been shared with the PLW400.

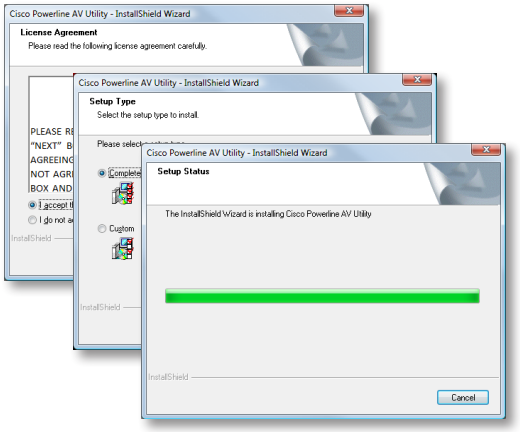
NOTE
The devices connected to the adapters will regain Internet access within five minutes.

Using the Utility

If you're having difficulty connecting the adapters using the previous method, or if you'd like to set more advanced options, you can use the configuration utility.

To install the configuration utility:

1. Connect a computer's Ethernet port to the PLW400's Ethernet port using the provided cable.
2. Insert the setup CD into the computer's CD or DVD drive, then follow the on-screen instructions.


Cisco Powerline AV Utility - InstallShield Wizard
License Agreement
Please read the following license agreement carefully.
Cisco Powerline AV Utility - InstallShield Wizard
Setup Type
Select the setup type to install.
Cisco Powerline AV Utility - InstallShield Wizard
Setup Status
The InstallShield Wizard is installing Cisco Powerline AV Utility
Cancel

To use the configuration utility:

1. After the utility is installed:

   On Windows systems:

   a. Click **Start**, **All Programs**, **Cisco Systems**, then **Cisco Powerline AV Utility**. The utility opens.

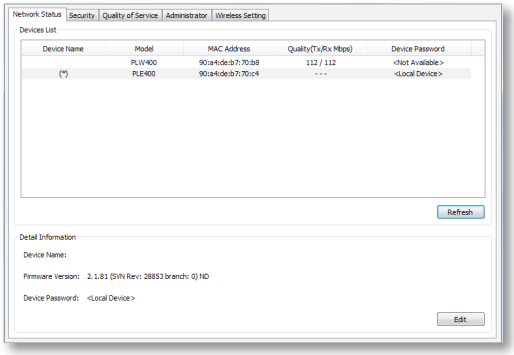
   On Mac OS X systems:

   a. Open the **Applications** folder, then double-click the **Cisco Powerline AV Utility** icon. The utility opens.

NOTE

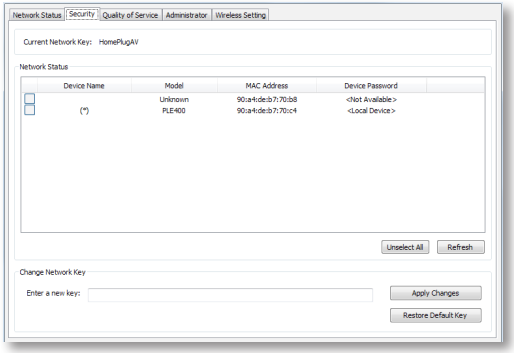
If you try to change the settings of a Powerline device from a computer that is not connected directly to that device with a cable, you are prompted for a password. The device password is printed on the back of the device.

2. Click the **Network Status** tab to view details of the Powerline adapters that are connected to your network.

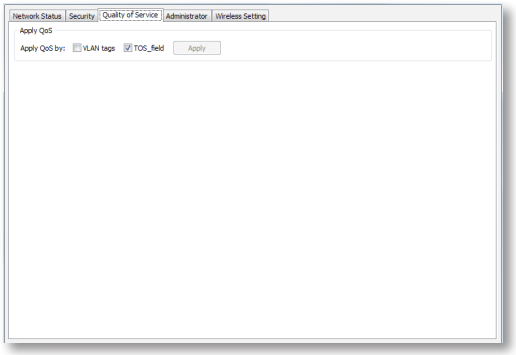


- If a connected adapter is not listed here, click **Refresh**.
- To change information for any adapter that's listed, select the adapter, then click **Edit**.

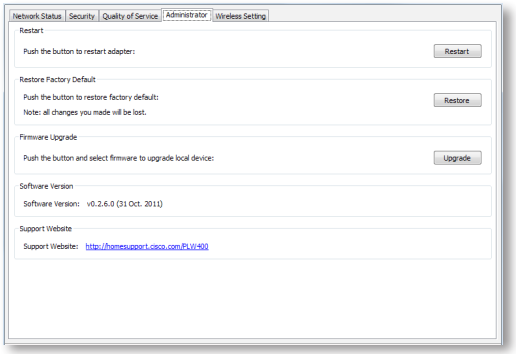
3. Click the **Security** tab to manually change the network key for each device. If you need to revert to the default key, click **Restore Default Key**.



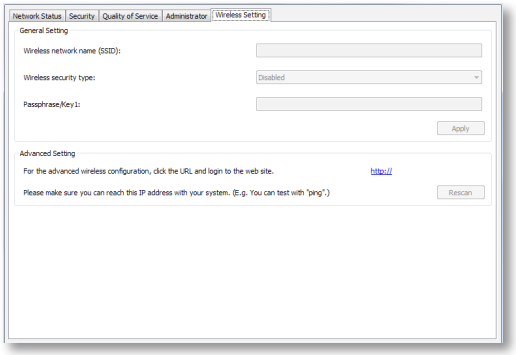
4. Click the **Quality of Service** tab to specify how the network prioritizes network bandwidth.



5. Click the **Administrator** tab to restart an adapter, restore factory defaults, or upgrade the adapter's firmware.



6. Click the **Wireless Settings** tab to change the wireless network name (SSID), wireless security type, or passkey.



Settings are applied to the adapter(s) immediately. Close the window to exit the utility.

Troubleshooting

Your wireless network device is not recognized by your network.

Try the following:

- Make sure that the wireless device is turned on and that its wireless networking is turned on.
- If possible, position the PLW400 near the wireless device that you want to connect.
- Avoid obstructions (such as metal file cabinets, mirrors, and thick walls) between the PLW400 and any wireless device you want to connect.

If you have set up advanced security for the Powerline network, check the following:

- Make sure all adapters on the Powerline network have been configured with the same network password. The network password must be identical in order for them to communicate with each other. See "Setting up advanced security" on page 6 or "Using the Utility" on page 6.

The Ethernet LED does not turn on after you connected a wired Ethernet device to the Powerline adapter.

Follow these instructions:

1. Make sure that the Ethernet network cable is securely connected to the adapter.
2. Make sure that the Ethernet network cable is securely connected to the network device you are connecting.

Or:

1. Disconnect the adapter from the power outlet.
2. Disconnect the Ethernet network cable from the adapter.
3. Wait five seconds.
4. Re-connect the Ethernet network cable to the adapter.
5. Re-connect the adapter to the power outlet.

6. If this solution does not work, make sure that the electrical outlet is working properly. Plug a different device into the outlet, and try to turn it on.

You cannot connect to other computers on your local network or to the Internet.

If you did not set up advanced security for the Powerline network, follow these instructions:

1. Locate the Powerline adapter connected to the computer that cannot connect.
2. On the left side of the adapter, use a pointed object to press and hold the **Reset** button for at least ten seconds. This resets the adapter to its factory default settings.

If you have set up advanced security for the Powerline network, check the following:

- Make sure all adapters on the Powerline network have been configured with the same network password. The network password must be identical in order for them to communicate with each other. See "Setting up advanced security" on page 6 or "Using the Utility" on page 6.
- If you are adding a new adapter to a pre-existing Powerline network with a unique network password, follow the instructions in "Using the Utility" on page 6.

The LEDs are flashing and I don't know what it means.

Refer to the following table of LED behavior to help diagnose the problem:

Powerline LED	Off	Not connected to Powerline network
	Flashing fast	Send/Receive data
	Flashing slow	Pairing
	Solid	Connected to Powerline network
Ethernet LED	Off	Not connected to Ethernet network
	Flashing	Send/Receive data
	Solid	Connected to Ethernet network
Wireless LED	Off	Wireless not connected
	Solid	Wireless enabled
	Flashing	Send/Receive data
Wi-Fi Protected Setup	Flashing slow	Connection in progress (up to two minutes)
	Flashing fast	Connection error.
	Solid	Connection successful
Power LED	Off	Device power off
	Solid	Device power on and ready
	Flashing fast momentarily	Factory default
	Flashing fast indefinitely	Pairing error/system error

WEB
If your questions are not addressed here, go to the Linksys Support website at **Linksys.com/support**.

Specifications

Model	**PLW400**
Standards	HomePlug AV, IEEE 801.11b/g/n, 802.3, 802.3u
Ports	Fast Ethernet (10/100)
Buttons	Wi-Fi Protected Setup, Easy Connect, Reset
LEDs	Powerline, Ethernet, Wireless, Wi-Fi Protected Setup, Power
Security Features	128-Bit AES Link Encryption, WPA2, WPA, WEP
Modulation schemes	1024/256/64/16/8 QAM, QPSK, BPSK, ROBO
Network client support	Up to 8 Powerline client devices, up to 32 wireless client devices
Utility OS requirements	Windows 7/Vista/XP, Mac OS X v10.5 or higher
Default SSID	"Cisco*XXXXX*" where *XXXXX* is the last 5 digits of the adapter's serial number

Environmental

Dimensions	113 × 73 × 33 mm (4.45 × 2.87 × 1.3 inches)
Weight	158 g (5.6 oz.)
Power	100-240V AC, 50-60 Hz
Certifications	FCC, IC, CE, WiFi, HomePlug AV
Operating Temp.	0 to 40ºC (32ºF to 104ºF)
Storage Temp.	-20 to 70ºC (-4ºF to 158ºF)
Operating Humidity	10 to 85% Non-condensing
Storage Humidity	5 to 90% Non-condensing

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